

**REMARKS**

Reconsideration of the application is respectfully requested for the following reasons:

1. Cancellation of Non-Elected Claims

Although claims 1-4 have been canceled to facilitate prosecution of the application, the Applicant reserves the right to submit claims 1-4, or claims directed to generally the same subject matter, in a divisional application.

2. Objection to Claim 6

The objection to claim 6 has been addressed by amending the last two lines of claim 6 to refer to each magnetically conducting plate rather than to a magnetically conducting ring.

3. Rejection of Claims 5 and 6 Under 35 USC §103(a) in view of U.S. Patent Nos. 5,945,765 (Chen) and 4,244,099 (Hayden)

This rejection is respectfully traversed on the grounds that the Chen and Hayden patents fail to disclose or suggest a stator that includes at least two pole plates *and a combination member made of a magnetically conductive material*, as claimed. As noted by the Examiner, the Chen patent does not disclose any sort of combination member, while housing 10 of the motor described in the Hayden patent, which the Examiner describes as a “combination piece,” is “*molded from thermoplastic or other non-magnetic, nonconductive material* (col. 2, lines 64-67 of Hayden), and therefore also does not correspond to the claimed combination member made of a magnetically conductive material.

The purpose of the claimed combination member is to replace the conventional non-magnetic shaft tube (see element 95 of Fig. 1 of the present application) or stator (element 80 shown in Fig. 2), which support both the pole plates and the coil, with pole pieces mounted to the stator coil support, and a magnetic member that either surrounds or extends

through the at least two pole pieces so as to mechanically *and* magnetically couple them together (via magnetic rings on the outer periphery of the pole plate, as recited in claim 5 and illustrated in Fig. 3, or via conducting plates forming a central hole as recited in claim 6 and illustrated in Fig. 4). The combination member couples the pole plates together in a simple manner, assembly being no more difficult than assembly of the stators illustrated in Figs. 1 and 2 of the present application, and yet the combination member can be a simple cylinder and further provides the advantage, because it is magnetic, of increasing magnetic flux induced in the stator, and therefore increasing the torque.

In contrast, the stator described in the Chen patent is similar to that illustrated in prior art Fig. 2 of the present application, including a non-magnetic stator arranged to support coil 34 and pole pieces, with no coupling between pole pieces, while the stator described in the Hayden patent is stacked on the shelf 27 of non-magnetic housing 10. Cup-shaped magnetic poles 17 and 20 might contact each other, as shown in Fig. 1 of Hayden, but they are not magnetically coupled by a magnetically conductive combination piece since housing 10 is clearly non-magnetic.

Because the Chen and Hayden patents fail to disclose or suggest, whether considered individually or in any reasonable combination, a stator structure in which the poles are magnetically coupled together by a magnetically conductive combination plate, thereby increasing the torque without complicating assembly, withdrawal of the rejection under of claims 5 and 6 under 35 USC §102(b) is respectfully requested.

4. Rejection of Claims Under 35 USC §103(a) in view of U.S. Patent Nos. 5,945,765 (Chen), 4,244,099 (Hayden), and 4,987,331 (Horng)

This rejection is respectfully traversed on the grounds that the Horng patent, like the Chen and Hayden patents, fails to disclose or suggest a magnetically-conductive pole plate combination member, as claimed. Instead, the motor structure shown in the Horng patent, which is by one of the inventors of the present invention, corresponds exactly to the motor

**Serial Number 09/964,344**

structure shown in "prior art" Fig. 2 of the present application, including coils fixed to a non-magnetic stator "base" that also supports the coil, and through which a bearing 5 is passed.

Having thus overcome each of the rejections made in the Official Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

Respectfully submitted,

BACON & THOMAS, PLLC



By: BENJAMIN E. URCIA  
Registration No. 33,805

Date: September 10, 2003

BACON & THOMAS, PLLC  
625 Slaters Lane, 4th Floor  
Alexandria, Virginia 22314

Telephone: (703) 683-0500

NWB:S:\Producer\bev\Pending A..H\HORNO964344\o1.wpd